UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/440,148	11/15/1999	YIWEI THOMAS HOU	35400/PYI/F1	2594

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EXAMINER
EMDADI, KAMRAN

ART UNIT	PAPER NUMBER
2664	

DATE MAILED: 04/24/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>2</u> MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on *13 February 2003* .

2a) ☒ This action is **FINAL**.   2b) ☐ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) *1-39* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) ☒ Claim(s) *12,13,25 and 27* is/are allowed.

6) ☒ Claim(s) *1-11,14-24,26 and 28-39* is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11) ☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

    If approved, corrected drawings are required in reply to this Office action.

12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____ .

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

    a) ☐ The translation of the foreign language provisional application has been received.

15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)   4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)   5) ☐ Notice of Informal Patent Application (PTO-152)

3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .   6) ☐ Other: .

DETAILED ACTION

Claim Objections

1. Claim 12 is objected to because of the following informalities: The claim has been

   allowed for reasons stated in the paper no. 3 provided: in paragraph 5 "the metrics

   server is changed to "a metrics server." Appropriate correction is required.

Response to Arguments

2. Regarding the applicant's concern for the mutual understanding of the term intranet.

   The examiner acknowledges the applicant's concern for the term intranet. The term

   "intranet" is commonly used in the art of networking systems, and the examiner has

   cited some of the applicants detailed references in the specification for the use of the

   term intranet, some examples are:

   "The **intranet** includes at least one server. The method includes the steps of non-intrusively measuring network traffic between at least one server in the **intranet** and at least one client outside the intranet or over the Internet" (Pages 3 and 4).

   "A particular of type of LAN or WAN is an intranet" (Page 4)

   "FIG. 1 illustrates an abstract model of a network including a measurement infrastructure of the present invention. The network 19 represents an intranet" (Page 5)

   Examiner notes that figure 1 is three servers, each server capable of communicating

   to each of the other two servers and to the attached clients. The (Figure 1) of de la

   Salle shows a separate network grouping or LAN that could constitute for a separate

   LAN 14a, connected to a server 32. The one server is shown and the following are

   definitions of an intranet are used in the art of networking systems shown by the

   following citations:

   " Any network which provides similar services within an organization to those provided by the Internet outside it but which is not necessarily connected to the Internet."
   (http://foldoc.doc.ic.ac.uk/foldoc/index.html)

"By an intranet, we mean a local network that uses the tcp/ip protocol and Internet applications."
(Nahkimovsky, A. SIGCSE Bulletin Conference Title: SIGCSE Bull. (USA), vol. 30, no. 3 p.297,
Sep. 1998)

" The current working definition of an Intranet is a limited, access network of linked computers that
uses a common Internet-based protocol to exchange data and information." (Fotsch, Edward)
Healthcare Financial Management, Pp. 30-31, Sep. 1996)

Given these three definitions combined with the applicant's definitions of an

Intranet, the examiner traverses the statement made in the amendment as to the

definition of an "intranet" "As such, de la Salle does not describe or suggest an

intranet, i.e., a network accessible only by users with authorization." As being invalid

as to the broadness of the term used by ones of ordinary skill in the art and further not

being limited to a network with authorizations specifically required to access the

intranet, and nowhere in the specification is the phrase intranet described in any

context to be limited by the authorized users, the written description included in these

amended independent claims includes this invalid limitation and the claims are

rejected under 112 1st paragraph and the prior rejections will stand.

3. The examiner would like to make reference to the given definitions outlined in the

specification for "intrusive" and "non-intrusive".

"**Intrusive** measurements or <u>active probing requires the use of dummy or probing packets to perform
measurements of the data traffic for the specific network</u>. Probing packets are injected into the specific
network in the same manner as other data packets being regularly introduced into the network by the
numerous computing devices. The probing packets are then monitored and sometimes traced as the
packets flow through the interconnections within the network. By monitoring and tracing the probing
packets, measurement of network traffic is fairly accurate and highly controllable by the device
injecting the probing packet into the network. However, intrusive measurement techniques, by
injecting and monitoring probing packets into a network, <u>often introduces additional network
overhead, i.e. burdens or reduces the capacity of data transferring throughout the specific network</u>. The
second category of techniques measuring network traffic is referred to non-intrusive measurement
techniques. **Non-intrusive** measurement techniques include passively monitoring the data packets
being transferred to and from the computing devices within a particular network. <u>No additional data
packets need to be created or introduced into the network and thus, no or very little network overhead</u>

is introduced. However, non-intrusive measurements sometimes do not provide an accurate reading for the particular network."

Claim Rejections - 35 USC § 112

4. The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

5. Claims 1-11, 14-24, 26, and 28-39 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

-   The term "intranet" is not enabled in the specification to include the limitation "a network accessible only by authorized users" and further given the definitions of an intranet above, from the specification of the applicant and form the various sources cited, the authorization process cannot be made to reason as an inherent function of an intranet, the claims are thus rejected under the written description requirement.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

7. Claims 1-8, 14-19, 28-32, and 34-36 are rejected under 35 U.S.C. 103(a) as being

unpatentable over de la Salle (US Patent No. 6144961) in view of (Dobbins US

Patent No. 5485455).

- Regarding claims: 1, 14-19, 28, 29 and 34-36 are, de la Salle teaches: a network

with a server 32 (Figure 1) and a probing method used to probe data packets for a set

amount of time (Col 4, lines 23-39), with an ongoing communication taking place and

the time allotted to measure traffic as a part of an larger ongoing exchange of data

(Col 4, lines 40-49), in a non-intrusive manner (Col 4, lines 61-64) a network

interface device and a connection to a destination device originating from a source

device where the devices mentioned are a client computer and a server respectively

(Col 9, lines 40-55), a separate intranet for the server communicating to clients

external to that intranet (Figure 1), but fails to teach of any plurality of metrics being

measured by the server and a processor coupled to the network interface. Dobbins

teaches: a network with a processor coupled to a network interface (Figure 5) and

metrics measured and calculated throughout the system to establish traffic routing

assistance providing a better efficiency (Col 4, lines 20-40). Therefore it would have

been obvious to one of ordinary skill in the art at the time the invention was made to

have combined a processor and metrics calculations with a server and client type

network using non-intrusive techniques to further, increase efficiency.

- Regarding claim 2, de la Salle teaches: a first packet being transmitted between two

nodes as a data segment is detected between the two nodes and an end to the data

stream is detected by a lack of packets or after a last packet (Col 18, lines 14-28).

- Regarding claim 3, de la Salle teaches: an IBM compatible computer and or various subnetworks as types of networks valid for the configuration described herein; however, de la Salle fails to teach IP addresses assigned to the server and client as references for the source and destination addresses used to identify the respective nodes on the network, examiner takes official notice that an IP address is well known as a means to identify a node on a network especially within IBM compatible computers and related subnetworks.

- Regarding claims 4 and 5, de la Salle teaches: a server with active communication to users outside the server's intranet (Figure 1).

- Regarding claim 6, de la Salle teaches: a network interface device and a connection to a destination device originating from a source device where the devices mentioned are a client computer and a server respectively (Col 9, lines 40-55), but fails to teach a header portion of the packet as the portion filtered, Dobbins teaches: a network interface device with a header as the means for lookup with the MAC address as a terminal means for header translation (Col 15, lines 33-37). Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to have used the header as the only means of data captured as a provision for necessary information as not to exceed beyond the required data in order to keep efficiency at a maximum.

- Regarding claims 7, 8, and 30, de la Salle teaches: server 32 acting as a router for calculating hop counts, examiner takes official notice that the most basic needs of a

router are memory for routing table storage and data forwarding and a network
interface.

- Regarding claims 31 and 32, de la Salle teaches: a probe computer that probes the
  network (Figure 2) but fails to teach of intrusive or probing packets being added to
  the regular flow of data in a respective network. Dobbins teaches: a probe packet
  used on a connection establishment determination network arrangement. Therefore it
  would have been obvious to one of ordinary skill in the art at the time the invention
  was made to have combined the use of probe packets on a network as an effective
  means to track packets on a network.

8. Regarding claims 9-11 and 37-39, are rejected under 35 U.S.C. 103(a) as being
   unpatentable over de la Salle (US Patent No. 6144961) in view of (Dobbins US
   Patent No. 5485455) in further view of Hershey (US Patent No.5375070).

- Regarding claims 9-11, de la Salle teaches: all of the above embodiments except: a
  processor as a means for updating, accumulating of metrics, and source and
  destination IP address information including timestamp information. Dobbins
  teaches: a processor 77 used to connect source and destination IP addressed units,
  and program a switch as to the valid connections (Col 17, lines 50-65), and metrics
  measured and calculated throughout the system to establish traffic routing assistance
  providing a better efficiency (Col 4, lines 20-40), Hershey teaches: a network with a
  timestamp as a means for tracing data for a time dependent network (Col 1, lines 40-
  46) and a data processor 105 coupled to memory 100 and a table for storage of source
  and destination information. Therefore it would have been obvious to one of ordinary

skill in the art at the time the invention was made to have combined the use of a

processor to establish routing information stored in a table for source and destination

routing with timestamp information for an added metric associated with the time

sensitive intervals in order to have active time information associated with each

individual packet for more precise packet analysis.

- Regarding claims: 37-39, de la Salle teaches: a network with a server 32 (Figure 1)

and a probing method used to probe data packets for a set amount of time (Col 4,

lines 23-39), with an ongoing communication taking place and the time allotted to

measure traffic as a part of an larger ongoing exchange of data (Col 4, lines 40-49), in

a non-intrusive manner (Col 4, lines 61-64) a network interface device and a

connection to a destination device originating from a source device where the devices

mentioned are a client computer and a server respectively (Col 9, lines 40-55), a

separate intranet for the server communicating to clients external to that intranet

(Figure 1), but fails to teach of any plurality of metrics being measured by the server

and a processor coupled to the network interface or a record adding and deletion

method dependent upon data metrics. Dobbins teaches: a network with a processor

coupled to a network interface (Figure 5) and metrics measured and calculated

throughout the system to establish traffic routing assistance providing a better

efficiency (Col 4, lines 20-40). Hershey teaches: a network routing system with a

routing table interfaced with network interfaces a memory 100 and processing unit

105 (Figure 1A) updated periodically depending on the source or destination packets

received therein. Therefore it would have been obvious to one of ordinary skill in the

art at the time the invention was made to have combined a processor and metrics

calculations with a server and client type network using non-intrusive techniques with

a dynamic record keeping unit to further, increase efficiency and maintain accurate

records of neighboring devices.

9. Claims 20-24, 26, and 33 are rejected under 35 U.S.C. 103(a) as being unpatentable

over de la Salle (US Patent No. 6144961) in view of (Dobbins US Patent No.

5485455) and further in view of Bhaskaran (US Patent No.5963540).

- Regarding claims 20-24 and 33 de la Salle teaches all a network with a server 32

(Figure 1) and a probing method used to probe data packets for a set amount of time

(Col 4, lines 23-39), with an ongoing communication taking place and the time

allotted to measure traffic as a part of an larger ongoing exchange of data (Col 4, lines

40-49), in a non-intrusive manner (Col 4, lines 61-64) a network interface device and

a connection to a destination device originating from a source device where the

devices mentioned are a client computer and a server respectively (Col 9, lines 40-

55), a separate intranet for the server communicating to clients external to that

intranet (Figure 1), but fails to teach of a second network server used to communicate

on a second network connection while communicating the above parameters and

signaling between the two servers. Bhaskaran teaches: a conventional network with

two servers (Figure 1) with networked links between the two servers on an IP

network (Col 1, lines 15-24). Therefore it would have been obvious to one of

ordinary skill in the art at the time the invention was made to have combined the

conventional network configuration of two servers with the above embodiment in

order to establish a conventional topological configuration for providing added

services to for flexible enhancement purposes.

- Regarding Claim 26, de la Salle teaches all of the above embodiments except a

second server, while it was shown that it would have been obvious to combine a

second server with a configuration taught by the applicant, it was not taught that the

servers would periodically exchange metrics data, examiner takes official notice that

it is well know in the art to a Microsoft Certified Systems Engineer or related network

training that a second server will communicate with a primary server periodically to

gather whatever predefined metrics are administered currently by the primary server.

Allowable Subject Matter

10. Claims: 12, 13, 25, and 27 are allowed for reasons specified in paper no. 3.

Conclusion

11. The prior art made of record and not relied upon is considered pertinent to applicant's

disclosure.

- Nessett (US Patent No. 5968176) Multilayer firewall network system.

- Jensen (US Patent No. 6067572) Path network routing system.

- Hultgren (US Patent No. 6134589) Dynamic quality control network routing.

- Vaid et al. (US Patent No. 6502131) Traffic management tool.

12. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time

policy as set forth in 37 CFR 1.136(a).

13. A shortened statutory period for reply to this final action is set to expire THREE

MONTHS from the mailing date of this action. In the event a first reply is filed

within TWO MONTHS of the mailing date of this final action and the advisory action

is not mailed until after the end of the THREE-MONTH shortened statutory period,

then the shortened statutory period will expire on the date the advisory action is

mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from

the mailing date of the advisory action. In no event, however, will the statutory

period for reply expire later than SIX MONTHS from the mailing date of this final

action.

14. Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Kamran Emdadi whose telephone number is (703)

305-4899. The examiner can normally be reached between the hours of 8am and

5pm. If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Wellington Chin, can be reached at (703) 305-4366. The fax phone

numbers for the organization where this application or proceeding is assigned is (703)

872-9314 for regular communications. Any inquiry of a general nature or relating to

the status of this application or proceeding should be directed to the receptionist
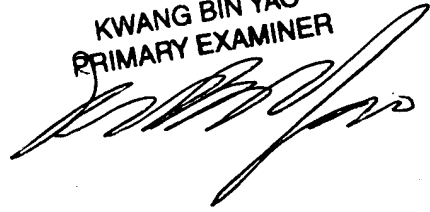
whose telephone number is (703) 305-3900.

Kamran Emdadi

04/19/2003

KWANG BIN YAO
PRIMARY EXAMINER